



On the breeding of coauthors: just call me Al

Gordon B Parker

Riding on the tail of the coauthorship explosion

Once upon a time, well-bred scientists sucked on the end of a quill and produced magnum opuses with single-author bylines, such as Charles Darwin's *The origin of species*. Following the model of other creative domains (eg, Rodgers and Hammerstein for musicals, Gilbert and Sullivan for operettas, and Galton and Simpson for television series), scientists moved to byline couplings (eg, the double-helix twist of Crick and Watson).

But now, the contemporary "explosion" in scientific publications has been outstripped by an explosion in coauthors, presumably reflecting publication counts that allow an academic career to slouch towards Bethlehem. This report provides some quantification of the proliferation in prolix and profuse bylines, notes their climate-change impact and argues for a climacteric solution.

Methods

We (et al, et moi) sought to examine the average number of authors of research reports (ie, excluding editorials, reviews, correspondence, book reviews and corrigenda) appearing in the July issues of two leading general medical journals (*BMJ* and *JAMA*) and, as a reflection of this author's discipline, two psychiatry journals (the *American Journal of Psychiatry* and the *British Journal of Psychiatry*), at 5-yearly intervals (2007, 2002, 1997, 1992 and 1987) over a 20-year period.

Results

Byline creep was established. In the *BMJ* there was a modest increase (of 36%) from 1987 to 2007, with the 2007 issue averaging 6.3 authors per paper. In *JAMA*, a differentiation of the article types from "articles" to multiple classifications in more recent years allowed comparison only of "original contributions" across relevant 2002 and 2007 issues. The average number of authors per paper increased by 73% (from 6.8 to 11.8) over that brief period. The number increased by 58% in the *American Journal of Psychiatry* (rising from 3.9 authors per paper in 1987 to 6.2 in 2007), and 130% in the *British Journal of Psychiatry* (from 3.2 in 1987 to 7.3 authors per paper in 2007).

During the quantification process, this author became distracted by the byline gallop in published letters. A "letter" is surely a brief personal communication from one person to another. Letters (other than belles-lettres) should not be expected to have great status or (other than petitions to the Queen) require multiple authors. But again, authorship of letters is breeding to such a profligate extent that the list of authors can take up more space than the letter itself. And letters breed letters. A representative example is a letter published in *Nature*, in which Nusbaum, the principal author, was joined by 53 coauthors.¹ However, as one author's name "was accidentally omitted", a new letter pointing out this grave anomaly was subsequently authored by 55 authors,² with the byline requiring eight lines of text, as against the one line occupied by the actual 23-word correction "letter".

Discussion

The current study — like much of science — merely quantifies what is widely known. It is perhaps more important to recognise the causes and the consequences. Unless otherwise explained, we must assume that the coauthorship explosion is a virus designed to advance the academic and research careers of individuals and their institutions. As competitive grant funding is like rain on a salt flat, coauthors will breed like Sea Monkeys in such a climate. While medicine is viewed as a particularly "collaborative" discipline,³ and doctors are expected to be caring and generative, gift authorship — defined in the *Lancet* as "polyauthoritis giftosa"⁴ — comes with a price.

The question must be asked: is byline creep good breeding, or overpopulation?

While acknowledging all those who have contributed to the research endeavour seems a model of responsibility, responsibility so diffused risks irresponsibility writ large. The equivalent of verbal filibustering, such unsightly frilly cluttering of articles signals more style than substance. The recent corrective strategy, whereby many journals now require authors' individual responsibilities to be stated, is merely a challenge inviting creative writing. The Biblical story of "Ruth amid the alien corn" has contemporary relevance, and journals need to review their current chaff-to-wheat ratio. In some arenas, such as medicine (eg, genomics, clinical trials) and other scientific disciplines (eg, physics), we also see a blitzkrieg phenomenon, in which it appears that overwhelming numbers of authors and affiliated institutes (rather than the science itself) are being deployed to allow a particular field to be captured or dominated, as described in *Nature*.⁵

Hypercollaborative sciences, such as high-energy physics, have led to so-called "mega-authored" publications arising out of international collaborations, like CERN (European Organization for Nuclear Research) in Geneva, where the OPAL and ALEPH collaborations had 209 and 277 coauthors, respectively, appearing on two articles.^{6,7} Particularly high-mega-authorship collaborations have arisen out of the DESY (German Electron Synchrotron) research group, with the ZEUS and H1 efforts publishing reports with close to, or more than, 300 authors.^{8,9} A species of gravitational interaction has emerged.

The impact? Could I suggest reference to an H1 collaboration article.⁹ This nine-page article has two-and-a-quarter pages taken up with the 296 authors, their 40 affiliative institutions and their 11 funding bodies. Next, as in cinematography, the assorted associates are likely also to be listed at the article's end as "data wranglers".

The future? Well the future is already here, as just noted and illustrated earlier by the *Nature* letter-correctendum scenario. All of us who aspire to having a letter published by *Nature* will be teamed up by "Google Coauthor" and coalesced into a consortium. The multiplicity of authors should ensure sufficient errors for the average letter published in *Nature* to generate at least one correction "letter". This might draw attention to authors who were initially missed, perhaps because they were late in bedding down with the original letter writers (spontaneous co-respondents

become formal correspondents). A few more “letters” to *Nature* might draw attention to a missing umlaut or some other critical byline error. Everyone will be able to fight for his or her contribution to a letter to *Nature* (risking *Nature* being read in tooth and claw?) and soon — as *Nature* abhors a vacuum — it will be unnatural for a scientist not to be published in *Nature*. The ceiling will have become the floor.

Solutions? Perhaps the once-condemnatory journalistic term “hack” needs to be redefined and a hacksaw brought into play. I propose that scientific journals publish only single-author papers or, if multiple authors are involved, the non-principal authors be grouped as “et al” in the byline and in the reference section. By rough calculations, this would reduce the contents of the average scientific journal by 12.6745%, which, multiplied by the current number of scientific journals, would save 250 000 hectares of South American rainforests and numerous butterflies from putting chaos theory into practice. We need ecoauthorship rather than having coauthorship put our climate at further risk.

Clearly, we need to ensure that “et al” receives its rightful place in the sun, replacing all coauthors in any article byline. At first pass, some might reject the possibility, perhaps judging that “et al” sounds like “also ran”. But the term “et al” has majesty and status. In traditional Hawaiian society, the hereditary “aliʻi” or “alii” occupied the highest societal class, even ranking above priests (and editors). Possessed of divine powers, they were able to place curses on others, including, presumably, first authors who traduced their byline status and any editor who did not view their manuscript as Nobel Prize-winning material. A more contemporary argument can be offered. Presuming that the name “Alfonso Joseph D’Abruzzo” means nothing to you, I can reveal that this man’s acting career was launched by his changing his name to “Alan Alda”, merely one step before the even more alliterative “Al Al”. The logical next step, a paper published by “Al et al”, has already occurred in a British journal,¹⁰ demonstrating respect for, and gravitas surrounding, “Al”. “Al” clearly implies “A 1” status.

Instead of the disquiet experienced by authors who quibble with the order of authorship, the proposed system would give comparable status to both the first author and those high-class members of the et al set; thus, it is a non-hierarchical parity model.

We could go further and delete the titles of many research papers, and merely add a subject to the et al predicate. For example, a paper by “Bloggs et alalia” would be immediately recognised as discussing speech impediments; “Bloggs et al-Qaeda” would be considering the impact of terrorism; “Bloggs et alimentary” would be a gastrointestinal review; “Bloggs et algolagnia” would cover painful sexual experiences; and “Bloggs et alanon” would report on alcoholism support systems; while a paper on climate change would be sufficiently explained by the byline of “Bloggs et al Gore”. The last suggestion even encourages the convenient truth that et al could run for President.

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Competing interests

The chance of being awarded a competitive research grant is increasingly tied to “performance criteria”, with publication counts often a key focus. To reduce my performance anxiety, I am changing my name to “et al” and propose to copyright myself when I write copy. I recognise, however, that no man is an

island and that there is a need for generativity — if not al-truism. So, if you feel a need for coauthors to add gravitas to your projected publication, I (et al) could be your man. As the Paul Simon song goes, “You can call me Al”.

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